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Claims:

1. A process for preparing N-protected 4-ketoproline derivatives of the general formula (I)

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$$\bigcap_{\substack{N^{H^n} \\ PG}} X \qquad (I)$$

in which

X is an acid, ester or amide function,

10 PG is an N-protective group which comprises a carbonyl function and is bonded via this function to the nitrogen,

by oxidizing the corresponding 4-hydroxyproline compound with an oxidizing agent in the presence of catalytically active ruthenium compounds, characterized in that the oxidation is carried out in an aqueous one-phase system, and the oxidation product (I) is allowed to crystallize out during the addition of the oxidizing agent.

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- 2. The process as claimed in claim 1, characterized in that the temperature during the oxidation is k=ept at ≤ 30°C, in particular ≤ 20°C, preferably ≤ 15°C.
- 25 3. The process as claimed in one or more of the preceding claims, characterized in that salts of hypohalites, halates and perhalates are employed as oxidizing agents.
- 30 4. The process as claimed in one or more of the preceding claims, characterized in that seed crystals are added to the reaction mixture after addition of 50% of the oxidizing agent.